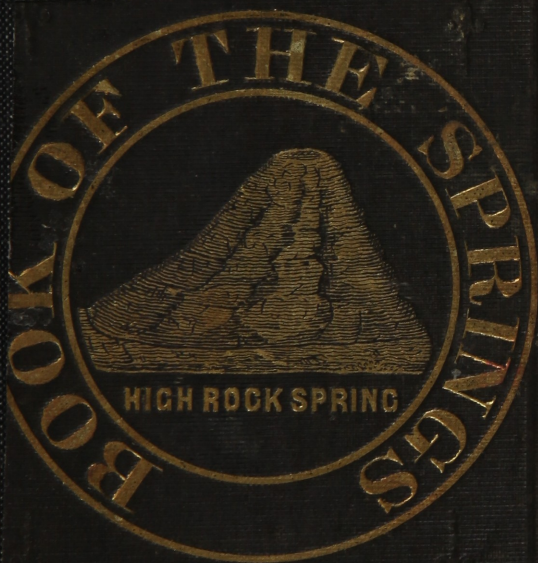


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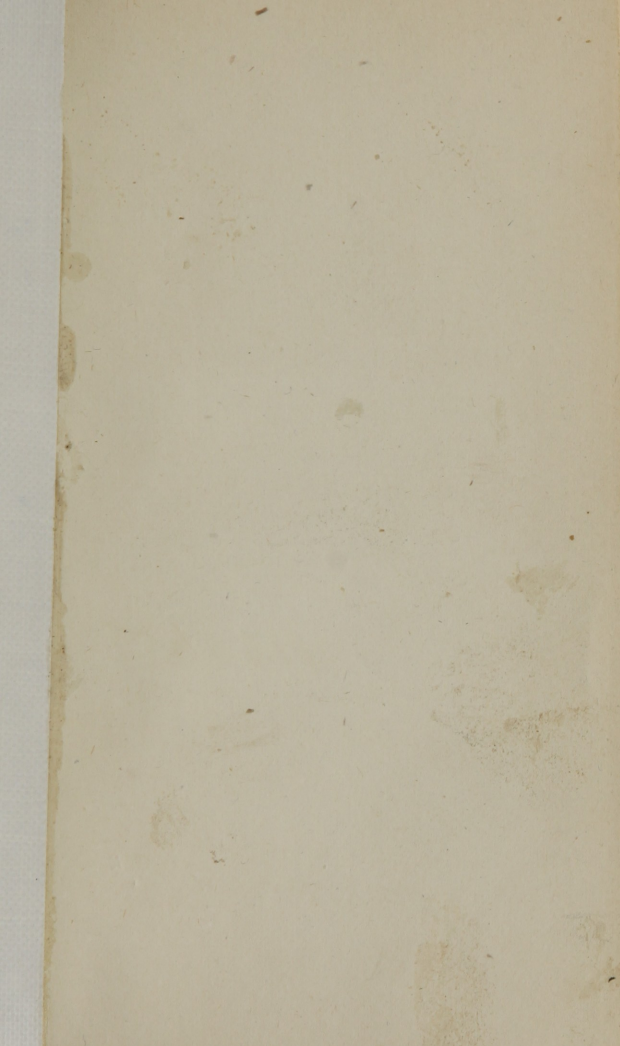
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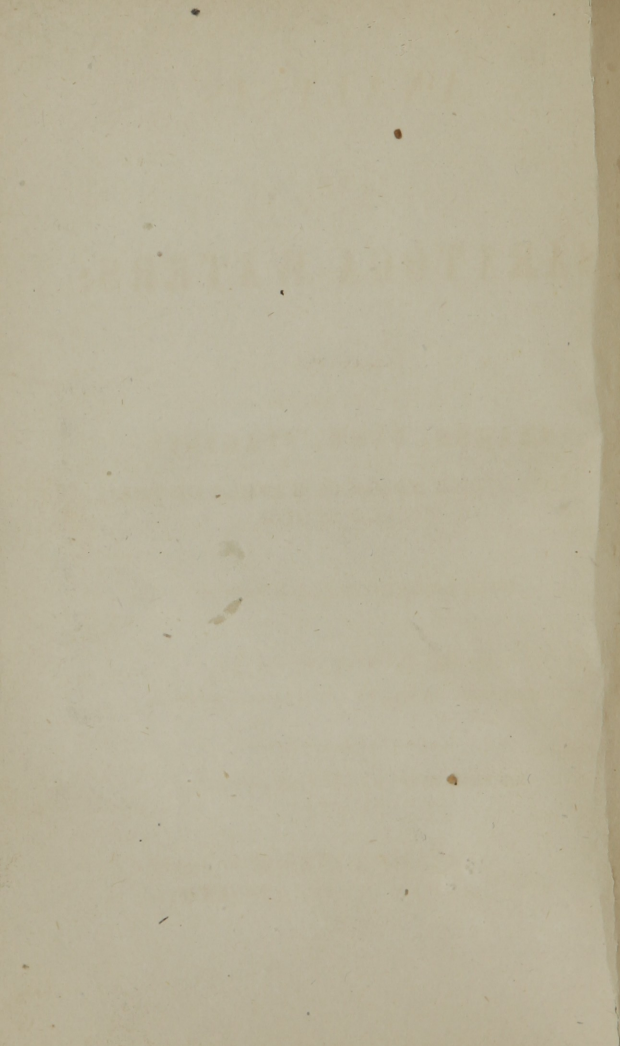
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# ANALYSIS

OF

## SARATOGA WATERS;

ALSO, OF

SHARON, AVON, VIRGINIA,  
AND OTHER MINERAL WATERS OF THE  
UNITED STATES.

WITH DIRECTIONS FOR INVALIDS.

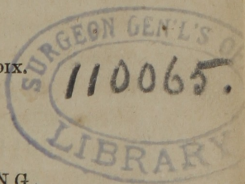
By M. L. NORTH, M. D.,  
A RESIDENT PHYSICIAN AT SARATOGA SPRINGS.

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SEVENTH EDITION; WITH AN APPENDIX.

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SARATOGA SPRINGS:  
PUBLISHED BY B. HULING.  
1858.



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# MINERAL WATERS AND BATHS.

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## CHAPTER I.

### INTRODUCTORY.

THE author, having spent several weeks during the Autumn of 1845, at the principal Sulphur springs of New-York State, in ascertaining their effects on himself and others; and finding, at some of the places, a great want of directions, especially in the use of the baths, he ventured to incorporate into this work, originally written for Saratoga Springs, a few hints which he hopes will prove auxiliary to the purposes of the invalids at those places. It certainly is undesirable, to say the least, for a sick stranger, at a watering-place, to be taking hot, cold, or shower baths, without any professional or scientific directions. The writer, therefore, hopes that it will prove acceptable, not only to invalids and to the owners of the mineral fountains, but to the physicians near them.

He begs leave, in this introductory note, to call the attention of all these parties to the chapter on baths. After carefully watching the effects of hot, tepid, cold and shower baths for fourteen years, and steadily pursuing the principles there laid down while administering them, he earnestly hopes that neither the physician nor patient may be deterred, by any theoretical or non-professional objections, from an unprejudiced and faithful trial of the directions therein contained. The rules of bathing, and the physiological laws on which those rules are founded, are applicable to all mineral waters, hot or cold, the world over, and are now sanctioned by all who have laid aside prejudice and gone thoroughly into the investigation.

The author is not ignorant of the great discrepancy of opinion among common people respecting baths; nor of his differing in sentiment from many of his respected medical brethren. He challenges respect for his opinions on baths, simply from the most unparalleled advantages of his position, arising, first, from the fact of baths always having been popular among the visitants; and second, from the practice of many of his patients, during the author's long residence at Saratoga, of subjecting themselves to his professional observation and attention, while

carrying out his measures of bathing and drinking.

A careful record has been kept of these observations and results, from 1838 to the present time (1855), and they include a particular statement of the symptoms, both at the commencement and close of the respective cases, as also at each visit; and these appear to him to furnish an ample foundation for a just estimate of the true effects of baths, and the proper mode of administering them.

Before dismissing the subject of baths, the author would remark that, at Saratoga, he confines his baths for invalids wholly to mineral waters, by which he intends either the saline or sulphur fountains. Carbonic acid is a decided stimulus to the cutaneous surface. The carbonic acid baths of Germany produce great heat and action in the skin, without any other agent whatever. The sulphuretted hydrogen of the sulphur bath is also stimulating: and there is much of these gases, particularly the carbonic acid, remaining in the bath when heated to 100 or 110 degrees Fahrenheit. If we add to these gases the common salt and other saline materials existing in many of the waters, we shall see why a decided preference should be given to these baths, particularly those of carbonic acid, in seeking to remove disease. There are now, at

least two or three bathing houses in this village where baths can be had at all hours of the day and evening, composed of saline, carbonic acid waters.

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## CHAPTER II.

### PROFESSIONAL ADVICE BEFORE LEAVING HOME.

THE writer has often thought that if invalids, when coming here, would have a thorough conference with their regular physician previous to leaving home, they might receive such directions as would be not only useful but a matter of economy. Many come here without any professional advice or direction or preparation. Having worn out their physicians, or been the round of the nostrums, they resolve to spend *two* or *three* weeks drinking and bathing in the pools of Saratoga! A visit to the Springs is somehow to cure them.

Precisely as if they should say, in an ordinary attack of sickness, "I will go to the druggist's and procure some medicine." "Ah! but what medicine?" "No matter: medicine is medicine." "But how do you know that your present disorder will be benefited by the medicine you select?" "I don't pretend to know; but I am sick, and there must be something



on the shelves of the apothecary, to whom everybody resorts, that will cure me."

In the same manner, valetudinarians often visit mineral springs. Without knowing at all whether their diseases be inflammatory or the reverse—whether they are plethoric or reduced—whether they need the water as an alterative, diuretic, cathartic or tonic—whether they need the warm, cold or shower bath, or neither. In short, in utter ignorance of the variety of ways the remedy can be made to bear on various disorders in different constitutions and temperaments, they mostly seem to come with two simple purposes—to deluge the stomach with as much water as they can swallow, and resort frequently to the baths. In this way the plans of the patient are often thwarted, his hopes blasted, and he departs, wondering that such crowds should resort to a place where he has received nothing but trouble and disappointment.

To the healthy and well-balanced frame a tumbler of the sparkling and delicious beverage—although it contains over thirty-seven grains of various saline matters, besides the gases—can do little mischief. And if ten or twelve tumblers are taken, the conservative powers of such a system will usually manage to evade the evil. But, when the patient

comes laboring under disease, with the healthy action suspended, and the economy in a generally deranged condition, the swallowing of ten or fifteen tumblers of this potent medicine every day is by no means a matter of trifling or impunity. How many, after various repetitions of these absurd and ill-judged potations, go home in disgust and despair, with every inflammatory tendency aggravated, and every irritation increased by the very remedy which has restored health to their neighbors and friends.

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### CHAPTER III.

#### HISTORY AND ANALYSIS OF SEVERAL OF THE SPRINGS OF SARATOGA.

##### CONGRESS SPRING.

AMIDST all the capricious elevations and depressions which watering places and summer retreats, from time immemorial, are known to have shared, the Congress Spring of Saratoga has stood unshaken. Its celebrity has arisen and been established by its own intrinsic merits. By means of bottling, its properties are known to men in all the four-quarters of the globe. This process has, probably, greatly accelerated the spread of its reputation in our own

country. The achievements of steam are doing still more, bringing from our cities and villages, representatives, who, on returning home, make their own reports to their friends and neighbors of the effects of these waters. The sum total of these reports, could we obtain it, would be the exact measure of public estimation of this and the other springs of this place. In the absence of this criterion, we have a proof of the general approbation of these springs by the steady increase of the village, founded solely on the demand of visitors for accommodation.

The curbing to the Congress Spring had become so defective, from its having been about forty years in the same position, that it formed an imperfect barrier to the fresh water which surrounded the fountain. In this way the original concentrated mineral water became somewhat diluted, and Dr. Clark, the owner, in the spring of 1842, very cautiously, but, as it proved, very wisely, caused it to be thoroughly overhauled, cleaned and renovated, by putting down a new, substantial curb, leading to the exact point of escape from the rock, and surrounding the curb by large quantities of clay, rendered very compact by artificial means. A great improvement was immediately perceptible in the increased amount of gas, in its marked saline taste, and its augmented

cathartic power. The older citizens recognized the Congress Spring of years gone by, and the event was hailed with congratulations by the inhabitants in general. The improvement was equally acknowledged by the visitants in the course of the summer, as was shown by the crowds which resorted to the favorite drinking place in the morning. The taste has appeared to show an increasing strength, and I have often, when resorting to it, observed the gas freely bubbling from its surface.

The popular decision respecting the medicinal effects of the spring, is abundantly confirmed by the repeated analyses made by Dr. J. R. Chilton, of New York. An analysis made soon after the re-construction of the spring compared with one done by him in 1840, both of which I would insert did not my limits forbid, showed an increase of solid matter from 298 grs. to 544.

The following is the result of an analysis which I procured from him, dated May 1, 1843 :

One gallon, or 231 cubic inches, contains,

Chloride of Sodium,	grs. 363.829
Carbonate of Soda,	7.200
Carbonate of Lime,	86.143
Carbonate of Magnesia,	78.621
Carbonate of Iron,	.841
Sulphate of Soda,	.651
Iodide of Sodium and Bromide of Potas- sium,	5.920



Silica,	.472
Alumina,	.321
	<hr/>
	grs. 543.998
Carbonic acid,	284.65
Atmospheric air,	5.41
	<hr/>
Cubic inches,	290.06

### THE PUTNAM SPRING.

ANALYSIS BY J. R. CHILTON, MAY, 1840.

One gallon, or 231 cubic inches, contains,

Chloride of Sodium,	grs. 214.00
Sulphate of Soda,	1.68
Carbonate of Soda,	14.32
Carbonate of Magnesia,	51.60
Carbonate of Lime,	68.80
Iodide of Sodium. and a trace of Bro-	
mide of Potassium,	2.00
Carbonate of Iron,	7.00
Sulphate of Lime,	.21
Silica,	.84
Alumina,	.56

	grs. 361.01
Carbonic acid, inches,	326.4
Atmospheric air,	6.4
	<hr/>
	332.8

A glance at the above analysis shows the Putnam Fountain to be highly impregnated with gaseous and saline materials, and to contain an amount

of iron which places it at the head of our springs, as compared with the analysis formerly made by Dr. Steele, and those latterly by Chilton, in its chalybeate and tonic powers. This spring, which is owned wholly by Mr. Lewis Putnam, is a favorite with many visitants. When bottled it deposits an iron-colored sediment, which is very light, and about the nature of which chemists are by no means agreed.

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#### IODINE SPRING.

This fountain, which is in the north-east part of the village, was explored and curbed by a few spirited individuals in the autumn of 1839, and was first brought into notice in the following summer. It is now in the hands of the heirs of the late Judge Walton, of this village. It has been analyzed by Prof. Emmons, of Albany, and Dr. Chilton, of New-York. Their results are very similar. The following was made by Prof. Emmons :

One gallon, or 231 cubic inches, contains,

Muriate of Soda,	grs. 187.0
Carbonate of Magnesia,	75.0
Carbonate of Lime,	26.0
Carbonate of Soda,	2.0

Carbonate of Iron,	1.0
Hydriodate of Soda,	3.5

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 grs. 294.5

Carbonic acid gas,	326
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Air,	4
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Cubic inches,	330
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This spring is very acidulous, light and easy to the stomach, and is peculiar for the small quantity of iron it contains.

#### PAVILION SPRING.

This fountain, which is near the center of the village, a few rods east from the Columbian Hotel, was excavated, curbed and brought to its present admirable condition, during the autumn of 1839 and the spring of 1840, by Mr. D. McLaren, of this village, at an expense of several thousand dollars. This great expense was incurred through the difficulty of sinking a large square enclosure formed of stout logs, to a depth of nearly forty feet in a soft morass, combined with the vast amount of water to be thrown out by relays of men at the pumps night and day, and the exposure of the workmen to suffocation, from the abundance of gas developed from the waters in the excavation. At length two

stout plank curbs, or square tubes, were carefully placed in separate parts of the bottom of the cavity, and secured in such a manner as to conduct the waters nearly forty feet, to an elevation quite above the natural surface of the land, where they are both discharging their rich and sparkling streams of medicated waters. Both these perpendicular rivulets have been analysed; but the western has engrossed nearly all the public favor, and is called the Pavilion Fountain. The gas is so abundant in this tube that myriads of small globules are often thrown nearly a foot from the surface.\* I insert the analysis made by Dr. Chilton, August, 1840:

One gallon, or 231 cubic inches, contains,

Chloride of Sodium,	187.68
Carbonate of Soda,	4.92
Carbonate of Lime,	52.84
Carbonate of Magnesia,	56.92
Carbonate of Iron,	3.51
Sulphate of Soda,	1.48
Iod. Sod. Brom. Pot.,	2.59
Alumina,	.42
Phosp. Lime,	.19
Silica,	1.16

	grs.	311.71
Carbonic acid,	359.5	
Air,	5.3	
Cubic inches,	364.8	

\* When the sun and moon are in conjunction.



## EMPIRE SPRING.

It is only about six years, if I rightly remember, since this spring first came into notice. The publishing of the annexed analysis, by Prof. Emmons, of Albany, exhibiting only an infinitesimal portion of iron, indicated at once its superior safety and excellence in inflammatory complaints, and led immediately to a trial of its effects by our citizens and others.

One gallon of the water contains,

Chloride of Sodium,	grs. 269.696
Bi-carbonate of Lime,	141.824
Bi-carbonate of Magnesia,	41.984
Bi-carbonate of Soda,	39.848
Hydriodate of Soda,	12.000

Bi-carbonate of Iron, a trace.

Solid contents, 496.352

Specific gravity, 1.039.

Carbonic acid abundant, but not stated.

It is the amount of iodine contained in twelve grains of the hydriodate of soda, and the entire peculiarity of *no iron* in the water, that has so rapidly made it a favorite. It bottles well; is largely ordered from abroad, and is on sale in most of our cities. Professor Chilton, of New-York, who has also analyzed it, has the following: "The amount of combined iodine is unusually large, and the proportion of active ingredients, to the gallon,

is fully equal to that of any of the springs at Saratoga."

It is a favorite among our village practitioners ; and under my own observation it has appeared, in a singular manner, to remove general unmanageable diseases, particularly scrofula, cutaneous diseases, and tuberculous consumption. It is lamentable that our profession *will not learn* that instead of directing their consumptive patients to shun the Empire Spring they should send them thither. The digestive organs, in that disease, should surely be put into the best possible condition, and here is a remedy scarcely surpassed as an alterative, unless by the cod liver oil, and with little risk, if taken properly, of increasing the pulmonary affection.

The Empire water is much used for other diseases, and, when taken in the morning, is an excellent cathartic. Indeed, I should hardly feel that I could practice my profession, at Saratoga, without this spring.

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#### UNION SPRING.

This name has been given to one of the ten springs, which are situated about a mile from the Iodine Spring, in an easterly direction, near the

road to Schuylerville. The following is its analysis, made by Dr. J. R. Chilton, August 19, 1841:

One gallon, or 231 cubic inches, contains,

Chloride of Sodium,	grs.	243.620
Carbonate of Magnesia,		84.265
Carbonate of Lime,		41.600
Carbonate of Soda,		12.820
Carbonate of Iron,		5.452
Iodide of Sodium and a trace of Bro-		
mide of Potassium,		3.600
Silica and Alumina,		1.570
		<hr/>
	grs.	392.907
Carbonic acid,		344.16
Air,		4.62
		<hr/>
Cubic inches,		348.78

The composition of the remaining springs, namely, the High Rock, Flat Rock, Hamilton, Columbian, and Washington, is so similar as not to need particular description. In one thing they all agree, in being highly charged with iron. Hence, although decidedly laxative, they are ranked under the common appellation of chalybeate and tonic springs; and are more often taken without regard to any aperient effect than the Saline Springs, whose analyses have already been given. Nevertheless, the High Rock and Hamilton have each their firm advocates and friends; and it is very common for

individuals to make their annual pilgrimage to this place, to take one of these springs exclusively, and in the common methods of morning potations, with a view to their cathartic effects.

The High Rock is an object of lasting interest and curiosity, and the visitants are few who fail to make it a visit and talk over its history. It is situated in the upper village, a few rods south of the Iodine Spring. It was the *only* spring for many years after the famous cure of Sir William Johnson, in 1767. The rock is of a conical shape, rising about four feet above the earth. It is about eight feet in diameter at the base and about fifteen inches at the apex. The cavity, at the top, is about ten inches in diameter, and increases in size as it descends. The water stands at about three feet below the top of the rock.

The Flat Rock Spring, so called from an extensive deposition of calcareous matter around the outlet, which was permitted to remain undisturbed till within a few years, is located a few rods northwest of the present Pavilion Fountains. The Hamilton is between Putnam and Congress Springs. The Columbian is within a few rods of the Congress, and the Washington, a little to the southwest of Congress Spring.



The above list includes all the saline springs in this vicinity, except Ellis' Spring, which emerges from the ground about two miles south of the village, immediately under the embankment of the railroad, and nearly west of the flouring mill, and a similar spring on the farm of Mr. Stewart, about a mile east of the village, which has lately been discovered. Both these fountains possess chemical and medicinal qualities, similar to those already described.

The Sulphur Springs within the village possess but feeble sulphureous qualities. Abel's Spring, on the southeast borders of Saratoga lake, has long been thought to possess decided manifestations of sulphur; and, in the spring of 1845, the Messrs. Marvin, and Dr. Freeman, of this village, succeeded in curbing and securing a most abundant stream of cold and highly transparent water, strongly impregnated with sulphuretted hydrogen and a small quantity of saline matter. This spring they have properly named the *White Sulphur Spring*, from a copious deposit of a white compound, found in the stream near the outlet of the spring. This compound consists principally of argillaceous matter, with a sufficient impregnation of sulphur to blacken silver in a very few minutes. The discovery of this

spring produced quite a sensation ; and, as it could be visited twice daily, through the summer, by a fine steamboat and a line of omnibuses, its properties became rapidly known to the visitors, and will soon be justly appreciated both for drinking and bathing. The testimony of invalids, particularly as to its internal use, has hitherto been much in its favor.

There is still another Sulphur Spring about two miles west of Saratoga village, on the farm of Mr. Benedict, and near Rowland's Stone Mills. This water contains table salt, lime and iron, besides sulphuretted hydrogen and carbonic acid. It promises well for bathing, and has already done much for the cure of cutaneous affections. Its powerful gush from the bosom of the earth, might well entitle it to the denomination of *The Great Sulphur Spring*. Some enterprising individual or company may succeed in insulating and securing a concentrated and efficacious sulphureous water, and thus, not only secure their own fortune but afford a most desirable accommodation to the invalids who resort to our springs.

## CHAPTER IV.

## THE MEDICINAL CHARACTER OF THE WATERS OF THE SARATOGA SPRINGS.

THERE are two methods of testing the nature of an agent that is to be introduced into the *materia medica*, viz., by carefully watching and recording the *medicinal effects* of the article on individuals, and by *chemical analysis*. The latter criterion is probably a more fallacious guide than is generally supposed. How often has the practitioner been surprised at the augmented, diminished, or less irritating effects of some off-hand combination that would be wholly unlooked for by estimating the separate agency of each article !

So of mineral waters. Chemical analysis cannot decide the exact medicinal effects of a new spring, independently of a faithful observation of its operation. For,

1st. Many medicines, such as oxide of iron, carbonate of iron, pulverized bark, calomel, the gum resins while in pills, capsicum, ginger, &c., pass through the alimentary passages with very little absorption. Mineral waters, on the contrary, as may be inferred from the experiments of Dr. Beaumont, are introduced into the blood by the absorbents of the stomach, without any previous deposi-

tion or digestion, and thus these mineral agents which, in their minute proportions, would be very inert in a state of powder, are admitted to the inner coat of all the blood vessels, and to the minutest branches of the secretory apparatus. How widely different these two modes of operation must be, all can readily understand.

2d. Chemical analysis cannot appreciate the qualifying or mutual effects of the ingredients on each other as above stated.

3d. In the language of the late Dr. James Johnson, of London, "Mineral waters contain, in all probability, many agents which we cannot imitate by artificial combinations. This is proved by every day's observation. Thus, the saline, aperient mineral waters will produce ten times more effect than the identical materials artificially dissolved and mixed. The same is true with respect to the chalybeate springs. A grain of iron in them is more tonic than twenty grains exhibited according to the pharmacopœia." "It does not follow, however, that waters contain no active materials because chemistry is unable to detect them. Powerful agents may be diffused in waters, which are incapable of analysis, or which are destructible by the process employed for that purpose. The only sure



test is EXPERIENCE of their effect on the human body."

Under the guidance of both these tests, we are authorized to say that these waters are 1st, laxative or aperient; 2d, diuretic; 3d, antacid; 4th, deobstruent; 5th, alterative; and 6th, tonic.

The medical faculty and the public have a general understanding of all these qualities, except the last; and I defer to the chapter on the manner of taking the waters, any farther remarks on these qualities, with the exceptions above named.

Before my residence here, I had been many years prescribing Congress water in bottles to my patients as a pleasant aperient. Its bracing effects I had never suspected. In conversation with a professional brother in Hartford, just before my leaving that city, who has a wide and respectable practice, and who is frequently prescribing Congress water, he seemed almost to have forgotten whether there was any iron in the article or not. This is, doubtless, true of many physicians who are constantly directing the use of this beverage. But, were these gentlemen stationed here, and obliged to watch its daily effects, when taken liberally from the fountains, on the pulse, color, tone and movements of the system; and to witness the unequivocal aggravation of local, inflammatory affections, when not counter-

acted by appropriate remedies, they would appreciate the anxiety felt by the writer that the profession, generally, should understand the exact nature of the case, and give their patients the proper directions and preparation when leaving their homes for the various mineral fountains at Saratoga.

If any suppose the physicians of this watering place have misjudged in this affair, or that the writer is unduly anxious that inflammatory affections should be kept down while patients are in the use of these remedies, let them examine the history of the various mineral waters of Europe. There is no exception to the fact that, whether iron be present or absent, an internal use of these remedies is productive of stimulating and tonic effects.

The Buxton waters, in England, which contain only 15 grains of saline matter in a gallon, and 6 cubic inches of gaseous products, have been found, from the record of 14,906 patients, to be highly stimulating and tonic. The bracing effects of the waters have proved a constant source of embarrassment to Dr. Robertson, of the place, and require continual counteraction.

In an extended and careful examination of the treatment adopted at the various watering places in Europe and our country, I have not met with one

spring, except simply saline, such as Séidlitz in Germany, and Cheltenham and Leamington, England, that does not need a concomitant reducing treatment in invalids laboring under inflammation or plethora. The cardinal importance of a right understanding of this topic, as it goes to obviate almost the only evil that can result from the use of our waters, is my apology for these extended remarks.

Yet, I must not be understood to say that all need depletion before they come or while at the watering places. Far from it. There are many who come with soft, slow pulse, pale countenance, and freedom from inflammatory tendencies, whom the saline springs exactly suit, without any previous medication. Crowds of such come and go annually, rejoicing in their visit to these fountains. There are others, too, of so cold and torpid a habit, that they need warming and acrid remedies as auxiliaries to the water; and there are some with such exquisitely irritable nerves as to require—not depletory measures—but anodynes, such as a pill every four hours of extract of hyoscyamus, carbonate of ammonia and camphor. I have been pleased to see how visitants of this character, whose bowels had been thrown into great pain and distention by a few tumblers taken in the morning, at Saratoga, could be made to bear full and effectual doses of the

water by the addition of such a sedative as the one above mentioned.

Still, there is a wide difference between a patient who brings a calm circulation, soft pulse, pale tongue and lips, and exemption from local obstructions, and one who is florid, full hot, with white fur on the tongue, hard, wiry pulse, and all those symptoms founded on a sanguine temperament, and subacute or chronic local inflammation.

The same disease, according to our imperfect nomenclature, needs two opposite modes of treatment. In *rheumatism*, for example, one patient may have been long afflicted without any active inflammation. His joints are stiff, and he feels the regular augmentation of his troubles from a cold, northeast storm. But, he is thin, pale, feeble, and his pulse is uniformly soft and slow. Such cases, whether chronic rheumatism, sciatica, or lumbago, will find most decided relief from drinking and warm bathing.

But if the disease be accompanied with heat, swelling, and pain of joints, aggravated by warm applications and motion, a white tongue and *hard pulse*, the most direct and positive injury must result from the potations and hot bathing, unless the system be brought *below* the grade of inordinate action, and this whether the spring be saline or sulphurous.



## CHAPTER V.

## THE INTERNAL USE OF THE SARATOGA WATERS.

WE now proceed to offer some directions for the use of visitants, on their arrival at the Springs :

The first inquiry made by the invalid, after suitable lodgings are procured, is, of course, "How shall I take the waters?" "When begin?" "What springs?" "In what quantities and at what hours?" These questions can be solved at every corner. In the language of the late Dr. Steele, "there are numerous persons who flock about the springs during the drinking season, without any knowledge of the composition of the waters, and little or none of their effects, who contrive to dispose of their directions to the ignorant or unwary, with no other effect than to injure the reputation of the water and destroy the prospects of the diseased."

The public have long since decided, and decided correctly, that, in a vast majority of diseases, these waters should be taken with a primary regard to their cathartic properties. Although they unavoidably produce at the same time diuretic, deobstruent, and even tonic effects, yet it is their impression on the bowels which seems to make the most palpable inroad on existing disease, and at the same time excites the attention and confidence of the individual.

I know, full well, the risk I incur, owing to the peculiarities of individual constitutions, in propounding a list of those diseases which I deem most fitted to the cathartic operation of the waters. Yet the reader is entitled to my opinion, such as it is ; and I therefore insert the following, without much regard to nosological arrangement, as comprising most of the diseases likely to be benefited by an aperient course of the mineral waters.

Dyspepsia in all its forms—constipation—chronic diarrhœa—hemorrhoids—jaundice—biliary calculi—palsy, without inflammation of the brain—hysteria—hypochondriasis—neuralgia, or nerve-ache, whether seated in the face, stomach, liver, bowels, uterus, or extremities—chronic catarrh—humid asthma—nervous palpitations—enlargement of the liver and spleen—incontinence of urine—gravel—leucorrhœa—irritable uterus—cutaneous eruptions—rheumatism—rheumatic enlargement and stiffness of the joints—diabetes—prostrate and stationary condition after acute diseases—dropsies—vertigo—periodical headache—spinal irritation—stricture of the rectum.

The next question is, what spring shall be selected ? With very little knowledge of medicine, any one can perceive that two persons, who are

laboring under the same chronic disease, owing to their individual peculiarities of constitution, recover in the use of very dissimilar remedies. Physicians have given the hard name of *idiosyncrasy*, or *diathesis*, to this peculiarity of constitution; and it is, that the proper waters and baths should be adapted to the diathesis of each individual, that brings so many to consult the physicians of this place.

By referring to the third chapter, it will be perceived that there is a great difference in the stimulating and bracing qualities of the various fountains; one or two of them containing little iron, while the Putnam spring contains seven grains to the gallon. Although I have already said that chemical analysis can never be tantamount to a scrutinizing and guarded observation of medicinal effects, I can yet truly say that, from many years' experience, I have found a most striking coincidence between these two modes of discrimination.

If the invalid is liable to fever, heat, or dryness of skin; of a full habit; if he bears abstinence well; if bleeding, calomel and salts are beneficial; if tonic and stimulating medicines and heating diet injure him; and, above all, if his physician has frequently told him that his pulse is hard and incompressible, he may safely conclude his diathesis to be inflammatory, and should resort to Congress or Empire

Spring for his morning potation. On the contrary, if he has a cool, pale skin ; is little irritated by medicines ; bears bleeding, and other modes of reducing, badly ; takes tonics well ; does well on a generous meat-diet, and a soft, slow pulse, he may pay his addresses at once to the Hamilton, Pavilion or Putnam fountain, or the other chalybeate springs, drinking in the morning and throughout the day.

Should the waters, in either case, prove too stimulating, the patient will discover it by gradual loss of appetite, sense of fulness, general oppression, and, sometimes, cholera morbus. In this predicament, the invalid often loses the whole expense and trouble of his journey by fleeing homeward in a panic, when a couple of days' abstinence from the water and from food, saline medicines and antimonials, and, in some rare instances, bleeding, will most invariably remove the "*water storm*," and allow the patient to finish a proper treatment at the Springs.

The proper time to take these waters, as a cathartic, is in the morning, and in the morning only. The reasons appear to me to be obvious. There has elapsed a period of sixteen hours since the principal meal of the preceding day, and eleven hours from the repast of the evening. In people of weak or irritable stomachs, this is the only time in the twenty-four hours in which the digestive organs



are not engaged in the solution and absorption of aliment. This, then, is the precise period to interpose a mild, exhilarating and efficient cathartic; and this should be taken so early and in such quantities as thoroughly to evacuate all the remains of the preceding day's digestion, and to make so much impression on the mucous membranes of the alimentary canal as to rectify the process of secretion itself.

This is the true Abernethian road to health for multitudes of bilious and dyspeptic invalids, and will stand the most approved method of medication, notwithstanding the numerous and laudable efforts that are made by the fraternity to discover a better way.

From one to three pints is the proper quantity. In some rare cases of females, however, the stomach has not the capacity to contain even one pint before breakfast. There are many men, on the contrary, who take eight and even ten half pints in the morning with ease and comfort. Whatever be the quantity that is ultimately found necessary by each person, it should be taken in three potations, and with short intervals between, occupying thirty or forty minutes in all. Brisk exercise, by walking or otherwise, is desirable during this time, and for a short period afterwards. And it is proper that at

least an hour should elapse between the last potation and breakfast.

I knew an intelligent gentleman, in the spring of 1839, when the mornings were quite cold, who would dress at four, walk nearly half a mile to the spring, finish drinking, and return to his bed, where he became thoroughly warm in season to allow him a walk after the sun was up, and before breakfast.

By patients of feeble stomach and low temperature the contents of a well corked bottle, which has stood in the lodging room over night, can be taken during the process of dressing, after which the walk to the spring will prepare them for the remaining potation. Or, the requisite quantity can be brought from the spring in the morning, and the bottles immersed in a kettle of warm water a few minutes previous to drinking. Although a considerable quantity of the carbonic acid escapes, the water tastes much better than one would expect who has not tried it.

Yet the invalid should never be deterred by indolence, irresolution or imaginary fears from going to the spring ; as it is incomparably better to take the beverage from the fountain, in the midst of the absorbing and even picturesque scenes of the " dipping room," and to take it fresh, too, from the

bosom of the earth. The apprehension that valuable elementary principles may possibly escape from the bottle, and that there are ingredients in mineral waters that the present chemical processes have never appreciated, will appear less absurd the more it is reflected upon.

The extreme dizziness which, in feeble habits, follows the potation of three to six or seven pounds of cold water, arises from the prolonged, unnatural coldness of the stomach, which acts as a sedative on the muscular power of the heart, which lies almost in contact with this mass of cold water, and thus robs the brain of its natural and healthy amount of blood. Hence the vertigo. The remedy is to take a part or all of this morning draught from bottles standing over night in your bed-chamber. While the dizziness remains, take frequently teaspoonful doses of compound spirits of Lavender in water; or take, in proper doses, ether or peppermint; chew freely, cloves, cubebs, &c.; at any rate, something acrid and warming should be persevered in until the stomach feels fully its stimulating effects, when the giddiness will disappear, and with it the anxiety and mystery with which it is accompanied.

Intelligent individuals have recovered here in three or four weeks while drinking at the springs,

who, during the preceding months have been just able to hold their disease at bay by a free use of the Congress water in bottles at home. I have a number of such cases on record, and would introduce them did my prescribed limits permit. Now is it supposable that the air and amusements of Saratoga could make this striking difference? Or, is there an energy and a health giving power in the medicine, in the exact constitution and locality which nature assigns it, that are not to be found when it has been some time separated from the place of its original formation?

In concluding the subject of the cathartic effects of these waters, it should be added, that in case six or eight tumblers in the morning prove inadequate to produce the desired object, instead of adding to the quantity during the day the attempt should be wholly relinquished until the following morning. It will not then be expedient to increase the quantity of water, but to aid its operation by some thorough, cathartic medicine. If the patient be of full habit, blue pills taken several evenings on going to bed may be suitable; or active doses of calomel two or three times, at the same hour. A table-spoonful of Epsom salts, or a dose of calcined magnesia, may be taken at bed time or with the first tumbler in the morning.



In feeble habits, some of the compound gum-resinous pills, or a few grains of rhubarb, may be preferable. Whatever article is selected as an auxiliary remedy enough should be taken to ensure thorough operations, after which, in general, the water alone will be preferable.

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## CHAPTER VI.

### THE USE OF SARATOGA WATERS AS AN ALTERATIVE.

By *alterative medicines* are meant all remedial agents that restore health to the system in a gradual, imperceptible manner, without any marked sensations or uncommon evacuations during their operation.

So great a majority of the complaints that appear at these springs require a free and copious use of the water in the morning that the possibility of their being so taken as to prove directly alterative and tonic, without their ordinary cathartic effects, may be wholly unknown to many of the visitants.

That these waters could be taken from one to two tumblers before each meal and at the hour of rest—not as a purgative, but expressly to be retained as long as possible in the circulating mass—and in this way to produce a new condition of the solids

and fluids, improving the strength, appetite and color, regulating the secretions of the stomach, bowels, liver, kidneys, &c., and proving rapidly tonic and deobstruent, did not occur to myself until I found one of the most intelligent and popular physicians in New-York city taking the Congress in this manner in the early part of the season of 1838.

This gentleman had been repeatedly to the Virginia springs, and, after much reflection, had concluded that the best manner in which he could take the water during the few days his pressing engagements at home allowed him to spend in Saratoga, would be in that above described.

To the long continued invalid who has painfully learned the difficulty of escaping from under the hands of disease, this mode of medication will seem at first view consistent and rational. He has abandoned all hope of being cured by a few powerful doses of *any* medicine. His thoughts are upon a gradual removal of diseased processes and the restoration of healthy ones; and, if he is true to his own interests, he has come to a settled conviction that time is a necessary ingredient in his recovery, and to an equally settled determination that, if a few weeks of hopeful amendment do not *establish* his health, he will spend months or years in its attainment.

But to return to the consideration of a *persevering* use of the Saratoga waters, and particularly as an alterative. This manner of using them consists in taking them in the quantity, ordinarily, of one tumbler and a half half an hour before or just after each meal, and at the hour of rest. Two tumblers are not too much for an adult, provided they do not prove decidedly cathartic. The object is, that the whole amount of saline matter, amounting to nearly forty grains to each tumbler, should remain in the circulating fluids as long as possible. This method might be useful to very many: but the cases in which it has proved, under my prescription, since 1838, most happy, are those where the disease is of long standing, and where the system requires a tonic and invigorating course.

From the reports of others, it appears highly probable that this same method of taking what are called the iron or chalybeate fountains, namely, the Hamilton, High Rock, &c., has operated very much in the way above pointed out. But I have confined my patients, hitherto, to waters of the Congress, Empire, Pavilion and Putnam springs; and it is only because the effects have been so decidedly favorable in using these that I am proposing their continued employment. It is impossible that I should describe minutely all the shades of disease in which this

course is likely to prove beneficial, but I subjoin a list of those diseases which, in my opinion, require an alterative course.

Scrofula—scrofulous tumors—scrofulous ulcers—rickets—goitre—many cases of neuralgia—chlorosis—amenorrhœa—enlarged tonsils—long continued indigestion—tabes mesenterica—sterility—secondary syphilis—abuse of mercurial medicines—obstinate intermittents—ministers' throat-ail, improperly called bronchitis—black jaundice—anœmia, or general paleness and bloodlessness—neuralgic heat of stomach—general exfoliation from the bones with ulceration.

#### CASE I.

J. R., an interesting boy of about eleven years of age, from one of the western cities of this State, was left here in June '39, with ENLARGED TONSILS. This disease is now so prevalent that many know its symptoms, and all know that the operation of cutting off the glands is quite common. But the excision of these enlarged glands by a surgical operation removes only one of the annoying effects of a general disorder. The process had been tried in this case; yet when he came under my care his tonsils were very large, there was great irritation about the throat, as evinced by constant and distressing hawking; he had a pale doughy face and poor appetite, with general languor and debility.



A tumbler and a half of the Congress water, taken from the spring, was prescribed three or four times a day, and the cold, mineral shower bath every second day. It was not one week before his appetite was greatly improved, and thenceforward he ate very freely and relished and digested everything. He attended Mr. Bangs' academy steadily. After staying between two and three months, he returned to his parents in the following condition. He has scarcely any trouble from thick, viscid phlegm in his throat. He sleeps well, the glands are nearly natural, a healthy color has supplanted the dark dingy hue of his cheek, he has great vivacity, his movements are vigorous, his limbs plump; in short, he has entire health. During the last half of the course he left the Congress and took the Iodine spring. I could perceive no difference in the rapidity of his convalescence. The cure of this deep-seated disease demonstrates the power of these waters when taken as an alterative or tonic.

## CASE II.

SCROFULA, WITH STRONG TENDENCY TO PULMONARY CONSUMPTION.

July 19, 1839, J. W., a single lady from C.; pulse 66 and soft; skin cool and moist; countenance bilious. Has lost six brothers and sisters by consumption. Tumors nearly as large as marbles beneath the skin. Chest narrow. Breath scanty. Habit

always spare. Generally feeble. Appetite absolutely gone. Sour stomach; eructations; frequent head ache. She remained till Sept. 11th. She took two tumblers of the Congress three times daily, half an hour before her meals. This quantity proved agreeably laxative, though not cathartic. The last half of the time she chose the Iodine spring on account of the taste, and she discovered no difference in the medicinal effects. She went to the spring for every potation, rain or shine. She also took a hot bath every second day, at a temperature from 105 to 110 degrees.

She leaves us with strong, uniform appetite, eating substantial food without trouble, her strength much increased, her countenance clear and bright, and with every proof of renovated health.

P. S. May 1, 1846.—Her health has remained good to this day.

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## CHAPTER VII.

### ANALYSIS AND MEDICINAL CHARACTER OF VARIOUS SULPHUR SPRINGS.

#### SHARON WHITE SULPHUR SPRING.

ANALYSIS BY DR. J. R. CHILTON.

One gallon contains,

Sulphate of Magnesia,	grs.	42.40
Sulphate of Lime,		111.62
Chloride of Magnesium,		2.40
Chloride of Sodium,		2.24
Hydro-Sulphuret of Sodium and Hydro- Sulphuret of Calcium,		2.28
		<hr/>
Solid contents,		160.94
Sulphuretted Hydrogen Gas, inches,		16.

## SHARON MAGNESIA SPRING.

BY PROFESSOR LAWRENCE REID, NEW-YORK.

Bicarb. Magnesia,	grs.	30.5
Sulphate of Magnesia,		22.7
Sulphate of Lime,		76.
Hydro-Sulph's of Magnesia and Lime,		0.5
Chlorides of Sodium and Magnesium,		3.
		<hr/>
Solid contents,		132.7
Sulphuretted Hydrogen, inches,		3.3

As we should infer from the analytical results, the offensive smell of sulphur, and the white deposite, are much more abundant around the White Sulphur than the Magnesia fountain. The same results coincide with general testimony at the springs, and with my own personal experience, and render it advisable that all patients whose diseases forbid the use of stimulants, should resort to the latter fountain in preference to the White Sulphur. I saw a patient whose disorders were of many years standing, and always of inflammatory tendency, who used free potations of this water for two weeks without one une-

quivocal proof that febrile disturbance had resulted from its use. A majority of patients will probably commence with the White Sulphur, on account of its containing more salines and more sulphuretted hydrogen, and, therefore, possessing the most medicinal efficacy. But should they have a parched mouth, hot skin, quickened pulse and loss of appetite, they are advised to stop eating absolutely for one or two days, take Seidlitz powders or Epsom salts, and, when the commotion has subsided, substitute the Magnesia for the White Sulphur spring.

Every observing individual who has taken of Congress spring and Sulphur springs, will perceive, that while the former produces its healing and restorative effects by watery evacuations from the bowels, and these without any positive morbid character, sulphur waters can scarcely be made to produce such evacuations; but, in whatever quantities, appear to bring about their happy results by strictly alterative effects. It is a most propitious circumstance to the community of invalids, that carbonic acid, saline springs and sulphur springs, are found in their highest excellence within one hundred miles of each other, and in the centre of the Empire State. The White Sulphur water will probably be exclusively used for baths; and for the mode of administering them, the reader is referred to the remarks on bathing in a subsequent chapter.



# RICHFIELD SULPHUR SPRING, OTSEGO COUNTY.

BY PROF. REID, N. Y.

One gallon—

Bicarbonate of Magnesia,	grs.	20.
Bicarbonate of Lime,		10.
Chloride of Sodium, and Magnesium,		1.50
Sulphate of Magnesia,		30.
Hydrosulphate of Magnesia and Lime,		2.00
Sulphate of Lime,		90.

	grs.	153.50
Sulphuretted Hydrogen, inches,	20.6	

From a short interview with Dr. Manly, I inferred that he was zealously devoted to the interest of the spring, and should be consulted in all cases of serious disease.

## AVON SPRING, LIVINGSTON CO.

ANALYSIS BY PROF. HADLEY.

Sulphate of Lime,	grs.	84.
Sulphate of Magnesia,		10.
Sulphate of Soda,		16.
Carbonate of Lime,		8.
Muriate of Soda,		18.4

		136.4
Carbonic acid, inches,	5.6	
Sulphuretted Hydrogen,	12.0	
		17.6

There are other springs at Avon, for the analysis of which I cannot possibly find space; but they may be found in a treatise by Dr. Salisbury of that place, who appears to have thoroughly studied the adaptation of the waters to the cure of disease, and is frequently consulted. Dr. Southworth is also near the springs. By the urbanity of these physicians and the kindness of Mr. Houghton, of the Temperance Hotel, my stay was rendered very agreeable, and from the established character of the mineral fountains, I do not wonder that such numbers should frequent them.

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### WHITE SULPHUR SPRING, VA.

ANALYSIS BY W. B. ROGERS, VA.

One gallon contains,

Sulphuretted Hydrogen,	inches,	2.5
Carbonic Acid,		2.
Oxygen,		1.448
Nitrogen,		3.552
		<hr/>
Gaseous contents,		9.5

One pint contains of solid contents,

Sulphate of Magnesia,	5.588
Sulphate of Lime,	7.744
Carbonate of Lime,	1.150
Muriate of Lime,	.204
Chloride of Sodium,	.180
Oxide of Iron, a trace,	
Loss,	.410
	<hr/>
grs.	15.276

## RED SULPHUR SPRING, V A.

BY A. A. HAYES, ROXBURY, MASS.

One gallon contains,

Carbonic acid,	inches,	5,750
Nitrogen,		6,916
Oxygen,		1.201
Hydro-Sulphuric Acid,		.397
		<hr/>
Gaseous contents,		14,264

50,000 grs., nearly 7 pints, contain,

Sulphur Compound,	grs.	7.20
Carbonate of Magnesia,		4.13
Carbonate of Lime,		4.50
Sulphate of Lime,		.47
Sulphate of Soda,		3.55
Siliceous and earthy matter,		.70
		<hr/>
	grs.	20.55

## BEDFORD SPRING, PENNSYLVANIA

BY DR. CHURCH, OF PITTSBURG.

Sulphate of Magnesia,	grs.	80.
Sulphate of Lime,		15.
Muriate of Soda,		10.
Muriate of Lime,		3.
Carbonate of Lime,		8.
Carbonate of Iron,		5.
Loss,		3.
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Solid contents,	grs.	124.
Carbonic Acid,	inches,	74.

## OAK ORCHARD ACID SPRINGS.

These springs are in the town of Alabama, Genesee county, 18 miles S. East of Lockport, New-York. I cannot learn that they have yet attracted much company ; but in bottles, the physicians of Philadelphia are prescribing their waters considerably in chronic diseases. In obstinate, anomalous affections of the skin, with general loss of tone, they promise much, and have wrought surprising cures. In chronic diarrhoea, they have proved invaluable ; and from the published testimony of the owner, whom I take to be G. W. Merchant, Lockport, New-York, and also from the statements of the Philadelphia physicians, they appear worthy of extended trial, in this



and other troublesome chronic complaints. There are several springs; but water from only one has been sent abroad in bottles. The following is the analysis of one gallon of that water by Dr. James R. Chilton.

Free Sulphuric Acid,	grs.	82.96
Sulphate of Lime,		39.60
Prot. Sulphate of Iron,		14.22
Sulphate of Alumina,		9.68
Sulphate of Magnesia,		8.28
Silica,		1.04
Organic extractive matter,		3.28
		<hr/>
grains,		159.16

It is remarked that the strength of the water is greater at some periods than at others, in the same spring.

One word of advice to the invalid who is seeking health at some of the Sulphur Springs, and who has no physician to consult, that is practically acquainted with the external and internal use of the waters—do not suddenly be discouraged. The sulphur waters may apparently injure, as the Saratoga waters sometimes do, and yet ultimately cure.

In case of apparent injury from the waters, observe a very spare diet. If you are hot or aguish, your stomach disturbed, with headache, vomiting or diarrhoea, stop the mineral waters and baths; stop eating; and take Seidlitz powders or salts. In this

way one or two days will be sufficient to allay the water storm, and allow you cautiously to recommence the course. You will find views similar to those just expressed, in the fifth chapter of this little book, as applied to removing the disturbing and bracing effects of the tonic, saline waters. At any rate, I advise you, in case you have an attack of vomiting and disturbed stomach, not to flee suddenly home, but to allow your storm to subside under the powerful effects of starvation and saline medicines, and then finish an extended trial of the remedy, which you may have taken much pains to reach.

Nevertheless, there may be cases of such unyielding disturbance, and aggravation of existing symptoms, as to lead to the conclusion that the system of the patient is too inflammatory for a favorable use of the remedy.

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## CHAPTER VIII.

### THE EXTERNAL USE OF MINERAL WATERS—BATHS.

Cold bath, from 52 to 65 degrees.

Tepid bath, from 65 to 85 “

Warm bath, from 85 to 97 “

Hot bath, upwards of 97 “

A BATH at about 95 degrees Fahrenheit, whether of mineral or simple water, is a pleasant thing. It

is cleanly, refreshing and soothing ; and, like a pleasant ride, or the society of a long absent friend, is *auxiliary* to health. But it is not strictly a medicinal agent at this temperature. Chronic maladies are cured by "instituting states or conditions incompatible with morbid action." But this bath makes no appreciable inroad on morbid action. The patient is conscious of no shock, no impression, no inconvenience, no perceptible change. It is a capital indulgence, and every way desirable in point of health and comfort ; though, at this temperature, not a powerful *remedy*.

But the invalid who has been forced from his home, and obliged to undergo the inconveniences of a public watering place, does not come thither to be *amused* with remedies. He wants *every* prescribed agent to tell on his disease. He knows that all *necessary* prescriptions from physicians, and all necessary medicines, are a matter of economy to one who has already sacrificed so much in coming. But it is nonsense for him to be wasting his time with ambiguous remedies.

What then are the principles which should guide the invalid or his physician in the employment of baths ? Will it be deemed a gratuitous or unfounded acknowledgement to say that the application of baths to the removal of diseases, is, among the fac-

ulty in general, one of the most vague and unsettled subjects? There are fixed notions about the use of the lancet, emetics, cathartics, blisters, anodynes and tonics. But select a given patient, and summon a dozen physicians in consultation anywhere, and let them decide. And if there is a majority in favor of the bath, let each assign the exact temperature, the length of time and frequency of repetition, and see if the above position is not confirmed.

Perhaps this discrepancy of opinion is only imaginary on the part of the writer. If so, he begs the pardon of his brethren. Yet it is his honest and full belief, that if they would express their exact sentiments on this point, they would universally concur with him. This vagueness of the principles of baths is by no means confined to the profession. Every man has a creed. The invalid has one—the keeper of the boarding-house has one—and the owners and attendants of the baths have their's.

Let a physician furnish an invalid with directions to take a bath of such high or low temperature, and of such duration that it shall give a decisive blow to the disease, and the directions will, very possibly, meet with a dozen comments and condemnations before he reaches the bath house. At that place great firmness and decision may be needed on the part of the patient, as well as unshaken confidence in the



prudence and discrimination of his medical adviser ; else the well-meaning and otherwise judicious attendants, may overrule and modify the whole procedure. It may be necessary, too, for the patient or his friends to see with their own eyes that the thermometer stands at the point prescribed. Did not some professional experience lead to these intimations, they would not meet the eye of the invalid.

My limits forbid the attempt to describe fully the popular notions about baths. One sentiment is almost universal, viz., that if a patient, whether feeble or stout—spare or plethoric—feels a glow after the cold or shower bath, it is the proper remedy. The mechanical effect of cold in contracting the muscular fibres, and the *sensation* of warmth—although the animal heat is a long time actually lower than before the shock—are proof enough that the whole effect is not only invigorating, but subversive of disease.

There is a similar agreement about the hot bath. If the person feels faint and feeble thirty or sixty minutes after leaving it and while in it, the measure is condemned—although for hours the skin and cellular substance may contain two or three pounds of extra blood, to the great relief of the internal organs—profuse and general perspiration continue equally long—the lips and countenance change from pale to

a florid aspect, the joints become flexible, and all the sensations, after a few hours become decidedly improved.

At our public fountains, where the application of a stimulating, saline and gaseous liquid to the whole external surface is often expected, almost as a matter of course, the responsibility of prescribing baths becomes a matter of serious import, and demands the anxious consideration of the practitioner of the locality.

Very early in the season of '38, P. C., Esq., from Massachusetts, had been under my care about two weeks for rheumatism of long standing, and had been rapidly improving under the combined influence of Congress water and active depletion. At that time he took, with my consent, a bath at 100 degrees. The effect was most unhappy. All the original stiffness and pain of joints, feverishness, hard pulse and feeling of stricture around the abdomen returned, and it required several days of the previous course to restore him to the same condition as before the bath.

This painful and mortifying incident led me to an earnest investigation of the principles of baths, and of all the authors within my reach. In a treatise on Baths and Mineral Waters, by Dr. Bell, of Philadelphia, I found a criterion which I looked for

in vain in Currie, Jackson, Scudamore, and other distinguished writers on this subject—a criterion which has in very few instances, to my knowledge, led me astray in its application to the diversified phases of disease—and one which I can most honestly, perhaps too credulously, recommend to the adoption of my fellow practitioners here and throughout the country, as a safe and intelligible guide.

The principle is simply this: *that in all febrile and inflammatory diseases, whether acute or chronic, in short, in all diseases—wherever the lancet is called for, there also will the cold, tepid or shower bath be suitable; and where the lancet would be injurious, there should the hot bath be used.* The simplicity of this rule will probably startle some. It may be inquired, “would you not take into the account such circumstances as plethoric habit, florid face, red tongue, the previous effect of warm and cold applications, and of tonic or debilitating remedies?” Certainly. But I say most decidedly, and from many trials, that by throwing one’s whole responsibility upon *the exact condition of the pulse*, and making this paramount to all other diagnostic symptoms, though not rejecting them as auxiliary guides, a physician will most effectually and infallibly bestow upon baths their powerful and just instrumentality in the removal of disease.

Let us apply this principle to some well known diseases ; for example, *rheumatism*. It is well understood at watering places, that baths of the same temperature sometimes injure and sometimes benefit this class of patients. The cold bath has, in many instances, rapidly removed powerful attacks of rheumatism.

Some winters ago, Mr. A. H. A., of this village, had been a considerable time under the attendance of Dr. Steel, for a severe attack of acute rheumatism. At length, at the urgent solicitation of the patient, he was taken from his bed by several men, placed in a large tub, and two pailfuls of cold, mineral water, poured on him through a sieve. He was then rubbed dry, and placed in bed between two warm blankets. This process was subsequently repeated ; and in one or two weeks the patient was below stairs and walking in the streets. He speedily recovered perfectly. Dr. Clark, the owner of the Congress spring, knew the circumstances, and told me he could refer me to a number of similar cases in this vicinity.

A member of Clark's Expedition beyond the Rocky Mountains, was cured of an obstinate rheumatism, while remote from professional aid, by twenty-five immersions in as many days, in the river, through a hole cut in the ice. Each immer-



sion was accompanied with shampooing by the Indian Doctor while in the water, and followed by frictions before a warm fire.

A Mr. E. W., of Rome, N. Y., having lost all hope of recovery, crawled to a river whose borders were covered with ice, and lay in the water as a bath. The disorder received such an impression that he was speedily restored to health. Mr. N., of New-York city, was accidentally thrown into the sea, in winter, near Stratford Point, and cured of rheumatism.

I must not be more particular. Every man of extensive practice could easily add to the above list. My own case-book would afford a number of instances in which baths at 65 to 80 degrees were strikingly useful.

The hot bath, on the contrary, everybody knows to have been wonderfully useful in particular instances of this same complaint—*rheumatism*.

I had a patient in August, '39, Gen. J. A. N., of New-York State, of florid countenance, short neck, full habit, weight 186 lbs.—fat and muscular—yet whose pulse was only 76, soft and perfectly compressible. Here, thought I, as he hobbled into my office, and stated his disease, is the man whom a hot bath would utterly upset or destroy. Yet, on a thorough examination, relying more on his *soft*

*pulse* than all other symptoms, I ordered him, in addition to the internal use of the water, to take baths of mineral water, fifteen minutes daily, of 106 degrees. To say his recovery was rapid, does not convey the meaning. He was well in two weeks, not a vestige of the rheumatism remaining.

The illustration of this principle in the treatment of rheumatism, must suffice for all diseases. Disorders of the same name require, in different instances, the adoption of different remedies. As far as baths are concerned, a most scrupulous investigation of the pulse—carefully distinguishing when it is hard and wiry and when soft and compressible—will form a safe guide in all ordinary cases. It should not be forgotten, however, that the daily use of hot baths may prove so stimulating as to be inadmissible when the patient recovers a certain degree of tone; nor that the cold bath may be so sedative as to require to be discontinued.

This then, is my rule. If the pulse is hard—demanding calomel, Epsom salts, antimonials or bleeding—whatever be the color or heat of the skin or the muscular strength—I prescribe a bath from 65 to 85 degrees, or cold shower, and have thus far had no reason for regret or mortification.

On the contrary, if the pulse is soft and slow, I have without hesitation prescribed the hot bath from

100 to 110 degrees, without any untoward result, although great languor may have been experienced while in the baths. If the patient had cool, perspirable skin, pale face, pale lips and tongue, the hot bath proved still more clearly beneficial.

Whatever may be the result of future observations, I can truly say, that, thus far, since adopting this simple criterion, the ordering of baths has ceased to be matter of painful uncertainty and doubt; and, moreover, that I have experienced extreme gratification in finding that when an accurate discrimination is made, and the remedy is boldly applied from a low temperature up to 110 degrees, according to the nature of each case, it has become a much more efficient auxiliary, and in many cases, the leading measure in producing rapid convalescence.

I invite, from my medical brethren near our widespread sulphur springs, who may not have fully adopted them, an unbiased and faithful trial of the foregoing principles, for the administration of a much abused but excellent therapeutical remedy.

## CHAPTER IX.

MISCELLANEOUS REMARKS ON SARATOGA AS A RESORT  
FOR INVALIDS.

THE first topic to which the attention of the reader is called in considering the peculiarities of Saratoga as a watering place, is *the condition of the atmosphere of this place*. It would be idle to attempt to prove to my readers that a "change of air," simply, is often and unequivocally a curative remedy. The profession, generally, are now united in the acknowledged benefits resulting from change of atmosphere. The plains of Saratoga are remarkable for an arid surface and a dry air. The soil here being alluvial and sandy, the atmosphere contains a very small share of moisture.

Add to the dry and bracing nature of this atmosphere, the highly balsamic or rather turpentine qualities with which it is impregnated, by the numerous pines and other forest trees that have been wisely allowed to remain in and around this beautiful village, and you will perceive at once that these considerations are by no means to be overlooked by invalids who are projecting the means of gaining health abroad. They especially concern those who



reside on our sea-board, on the banks of rivers, and in low, clayey soils. Independently of the other powerful attractions for invalids at Saratoga, the pure and balsamic atmosphere should, of itself, induce many to make a trial of the location.

Another topic to which I wish to call the attention of the reader is, *the agreeable and delicious qualities of the waters of Saratoga*. I have studied minutely various authors on the mineral waters of Europe and America, since my residence here ; but I truly do not find in nature so admirable a combination for chronic diseases as is to be found in the various springs scattered along this valley. I need not tell my readers that a course of well selected laxatives is, of itself, sufficient to remove a multitude of chronic complaints. This is universally understood. What, then, should we not expect from daily periodical evacuations, by a medicine, delicious, cool, exhilarating, full of agreeable, enlivening qualities, and containing salts, antacids, lime, iron and even iodine ? These remarks apply only to the saline springs, or those which contain the least proportion of iron, and without alluding to the various methods of internal and external administration of all these waters.

Were these medicines of nature as disagreeable to the taste as the productions of the apotheca-

ry, they never could have gained such celebrity. It is the happy combination of acidulous and saline properties in these cooling beverages, that adapts them to the taste of the sickly invalid. It is this which causes many thousands, who are confined by disease at home, to long for a place by the side of these gushing fountains, that they may slake their urgent thirst. It is this, combined with the vivid remembrance of returning health, which brings multitudes here from season to season.

The very agreeable qualities and the efficacy of these waters have placed them entirely above all competition, short of the continent of Europe, and established them on so immovable a basis as to relieve the inhabitants of the place from all trouble and expense in procuring public notices and commendations of the Springs abroad. From my own professional business and correspondence, I could easily fill a volume with testimonials in their favor. The two following documents from the editorial columns of different newspapers, I beg leave to introduce in this place, as specimens of what is often thrown into the Journals by disinterested persons.

“Steam Boat Erie, North River, Aug. 26, 1839.

“*Mr. Editor*—I am now on my return from Saratoga Springs, where I have spent three weeks

greatly to the benefit of my health. When I arrived there it was with some difficulty that I walked from the car house to the Temperance House. I can now walk two or three miles without much fatigue. The effect of the mineral waters on my system has been most salutary. The same is true of many of my old acquaintances. Many seem to think that these waters are the 'Matchless Sanative' for almost every disease that affects the human race. Their medicinal properties are indeed wonderful, and many of the cures which they effect border nearly on the miraculous. If their regenerating effect on the inner man were as great as it generally is on the outer man, the pleasant village of Saratoga might indeed be a garden of Paradise.

R. G. W.

From an Albany paper of July 12th, 1839.

"We made our annual flying visit to Saratoga on Saturday, and returned to wonder, as usual, why *all* who have leisure and means, do not pass their summers at these delightful Springs. There is no other place where so much of what we ardently desire—health and happiness—is to be found. An hour passed at the *Congress Spring*, refreshing and invigorating the system, and imparting cheerfulness and buoyancy to the spirits, is a luxury of inestimable

value. Indeed there is nothing like it in reality or imagination."

But on this subject I must not enlarge. "Selfishness," "village interest," "private emolument"—may have already flitted through the mind of the reader. Well, let that pass. Whatever motives may have contributed to this publication and the present remarks, the invalid has only to consult his *own* interest in weighing the above and many other similar testimonies that might be adduced: the writer only claiming that common humanity and sympathy for his fellow sufferers through which every one, who has been rescued from disease himself or has had his friends so rescued, is prone to recommend the remedy to his acquaintances. This license, I claim, witnessing what I have on this post of observation; and feel that I should be recreant to the professional responsibility I owe my fellow men, did I not contribute my humble effort to diffuse widely the information of the healing influences of these waters.

Another topic which should not pass unnoticed, is a *proper attention to diet and regimen*. There is not a doubt in my mind that at this watering place, there is both among physicians and patients too great laxity and indulgence in respect to the pleasures of the table. If there was but one large



boarding establishment here, owned by one or a few individuals, as is the case at some Springs in Virginia and other places, a more rigid system of diet could be enforced. Let us hear the disinterested remark of Dr. Hunt, a distinguished physician from Washington, who erroneously supposed himself cured of pulmonary consumption, at the Red Sulphur Spring in Virginia in the summer of 1837. "The visitors who were most benefited by the water, remained here five or six weeks; confined themselves to a diet of rye mush and milk; and were industrious in rising early, drinking the water and taking exercise. Others who indulged themselves in eating, sleeping late in the morning, and lounging about during the day, derived but little advantage from the use of the water, and generally returned home dissatisfied." This is the Spring so famous on account of its reducing the pulse in incipient consumption, and other inflammatory diseases. But if patients in general, nay one quarter or one sixth of the whole number, can be brought to observe the same rigid abstinence from stimulation and the same "*extremely low diet*," to use his own language, that he observed, cases enough of slow pulse would occur. The reason why his pulse, in that state of starvation and repose from a very fatiguing and irritating journey, and from ardent professional engagements, should be reduced from 115 strokes a minute to 78, is sufficiently ob-

vious. Although Dr. Hunt took from six to twelve tumblers of Sulphur Spring water a day, it plainly proves nothing as to the sedative influence of the water, when conjoined with his abstemious regimen. It only proves the good effects of spare diet, repose, and laxatives of an excellent character: and I have little doubt that should the patients of the Red Sulphur be tempted by the tables of Saratoga, the reports of the sedative effects of that Spring would soon cease.

The above strictures are in no sense derogatory to the Red Sulphur Springs as an establishment. It is rather an acknowledgment of our own impotency in enforcing a sufficiently spare diet in inflammatory diseases. Saratoga is proverbially a hungry place. A powerful appetite is produced by the waters. It is the interest of the boarding houses to provide an inviting table. What, then, shall guard the craving stomach of the valetudinarian from nullifying all the expected benefits of his visit? The family physician may do much before the patient leaves home. A watchful self-denial of the invalid himself, can do more. As he convalesces, however, it is allowable that he should gradually, but cautiously, enlarge his diet so as to give full employment to the stomach as it regains its powers.

Before finishing this subject, it ought to be said, that the above remarks apply only to inflammatory

diseases, in which reducing measures in general are appropriate, and that there are many cases here every season in which a highly stimulating diet with condiments is strictly necessary to recovery.

4. The family physician should state fully and honestly to the patient the *absolute necessity of a thorough and extended trial of the waters*. Experienced practitioners know very well that a complex medicine which can, by internal and external exhibition, be made to operate as an alterative, deobstruent, antacid, aperient, diuretic and tonic, should not be abandoned on a slight trial. They know, too, what their patients cannot appreciate, the indispensable necessity of some extent of time in removing deep-seated and long continued maladies. How preposterous, then, for invalids who have been laboring under the influence of *established* disease for months or years, to hope they can eradicate and banish these diseased processes in one or two weeks!

I conclude in the language of my friend, Prof. Delamater, Jr., of Cleveland. "Blessed beyond example in so rich a source of health and wealth to her citizens, with a power unequalled of imparting relief to the physical maladies of her countrymen, with a bracing and balmy atmosphere, and a village rich in the envied attractions which can entertain and make happy, long may the crystal streams of Saratoga remain a joy and a blessing to our land!"

## APPENDIX.

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### THE VILLAGE—RIDES—AMUSEMENTS, &c.

SARATOGA, resorted to at first by a few invalids to benefit themselves by partaking of the waters that flow from its fountains, has, in the course of half a century, grown up to be one of the largest and most beautiful villages in the State, and is now during the summer season one of the greatest resorts of the wealth and fashion of the country on this continent. It was incorporated in 1826, and its growth has been steady and somewhat rapid, until at this time it numbers near 6,000 inhabitants.

The citizens have always shown a commendable liberality in improving and beautifying their village, in order that it may be pleasant and comfortable for the thousands that annually resort to the place during the visiting season.

The streets are well shaded by a beautiful row of maple, elm, horse-chestnut and other trees, set along the outer line of the sidewalks, and the walks of the



principal streets are well flagged, rendering a promenade pleasant and agreeable. The hotels, stores, shops, and many of the dwelling-houses are lighted with gas, and in the highth of the season the principal streets present a thronged and brilliant appearance, that is likened very much to Broadway, New-York.

There are three large hotels that are open only during the visiting season, viz: June, July, August and September. These hotels are the UNITED STATES HOTEL, corner of Broadway and Division street; the CONGRESS HALL, corner of Broadway and Bath-street; and the UNION HALL, corner of Broadway and Congress-street. They will accommodate from five hundred to one thousand persons each, the proprietors engaging lodgings in private houses adjacent during the height of the visiting season. Their prices are about the same as first class houses in the cities.

Excellent Bands of Music are employed at each of these Hotels, who play afternoons and evenings, from the fifth of July to the first of September.

Beside these there are several other hotels and large boarding houses, open generally all the year, accommodating from seventy-five to one hundred and fifty persons each. Of this class are the MARVIN HOUSE; the AMERICAN HOTEL; the CRESCENT; the COLUMBIAN HOTEL; the WASHINGTON HALL;

the BROADWAY HOUSE; MRS. WILBUR'S PRIVATE BOARDING HOUSE; the FRANKLIN HOUSE, &c. &c.

The proprietors of Congress Spring, at the south end of the village, and of the Empire Spring on the north, have laid out beautiful grounds adjacent to their springs, and the votaries of health and fashion meet every morning around those springs to sip of their health-giving waters, and wile away time between their potations, in promenading about on the well gravelled walks. A band of music from one of the hotels plays at the Congress Spring about two hours every morning.

The SARATOGA WATER-CURE of Dr. Bedortha is a very popular establishment, furnishing as it does an opportunity of undergoing the Hydropathic treatment under the superintendence of experienced physicians, and using the mineral waters fresh from the springs at the same time.

Dr. E. S. Strong, and his wife, also a regular physician, have an institution at Saratoga for the treatment of female complaints and weaknesses, on the plan of the celebrated Dr. Hamilton of Rochester.

There are two good bathing establishments open during the season, at which can be obtained mineral or fresh water baths, either cold or warm. One of them is situated near the Putnam Spring, and the other at the Hamilton Spring.

The BATTLE GROUND, and place where Burgoyne surrendered his army to Gen. Gates, are distant some twelve miles from Saratoga, and a day may be well spent in visiting them and examining with the local guides the many places of historic interest thereabouts.

SARATOGA LAKE, some four miles from the springs, is a delightful sheet of water, and large parties visit it daily during the season. There are several hotels situated upon its banks where fish and game dinners are provided for parties, but the principal of them are those kept by C. B. Moon, and by Mr. Avery, situated near each other and at what are called "the Narrows," where the lake narrows into its outlet, called Fish Creek. At these places sail and row-boats are provided for parties, presenting almost irresistible temptations for a trip upon the water.

The HIGH FALLS of the Hudson, situated at Jessup's Landing, some fourteen miles north of the village, upon the Saratoga and Hadley Plank Road, is an interesting place and well worthy of a visit to those having a day's leisure. The road leading to the falls from Saratoga is rather ascending, and at the distance of six miles from the village a splendid panoramic view is spread out before the spectator that will bear a favorable comparison with many that have been celebrated by travellers in other lands.

Luzerne, a few miles beyond Jessup's Landing, is

a delightful village, shut in on all sides by high hills. It is at the junction of the Sacandaga and Hudson river, and they come together pouring and tumbling over rapids, presenting an interesting sight. At this place there is a hotel, celebrated far and near for its fish and game dinners. Its larder is always supplied with quantities of brook trout, and at a day's notice the landlord can present such a spread of fish and game as will delight the greatest epicure.

The Sacket's Harbor and Saratoga Railroad, in process of construction as this book goes to press, passes near the High Falls of the Hudson, and through Luzerne. It will probably be completed before the edition is sold, and will furnish an easy means of access to these two places, as well as to several others farther in the wilderness.



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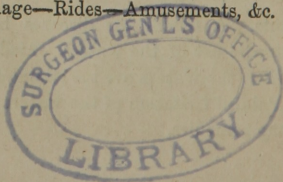
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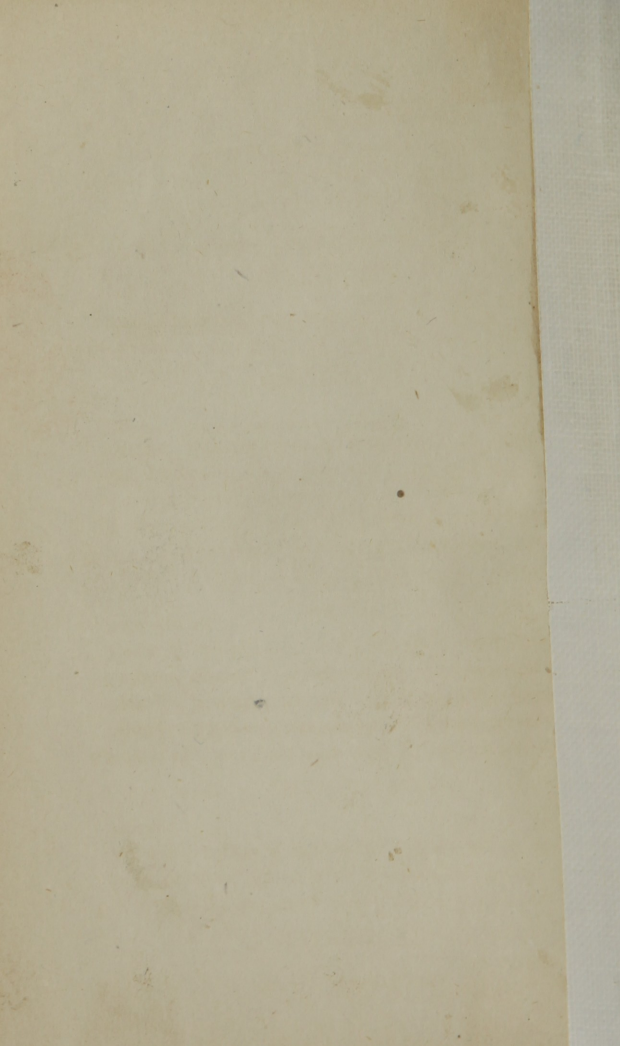
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